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(54) Differential delay element to prevent common mode oscillation and input hysteresis

(57) A system for providing a differential delay element which optimize the prevention of both common mode oscillation and input hysteresis. The system includes a first voltage supply terminal, a second voltage supply terminal and a current-regulating voltage terminal. The system further includes a current-control MOS transistor having its source connected to the first voltage supply terminal and its gate connected to the current-regulating voltage terminal. A pair of inverters are connected to the current-control MOS transistor. Each inverter has an input MOS transistor with its source connected to the drain of the current-control transistor and its gate forming a respective input terminal, and a load MOS transistor with its drain coupled to the drain of the input transistor and forming an output terminal, and its source connected to the second voltage supply terminal. The system still further includes a pair of cross-coupling means to prevent common mode oscillation, each connecting the gate of the load transistor of a respective inverter and the output terminal of the other inverter to form a positive feedback. A pair of MOS diodes are coupled to the load transistors to prevent input hysteresis characteristics. Each diode is coupled between the drain and the source of a respective load transistor. To prevent both common mode oscillation and input hysteresis, the channel sizes of the diodes substantially equal the channel sizes of the load transistors.

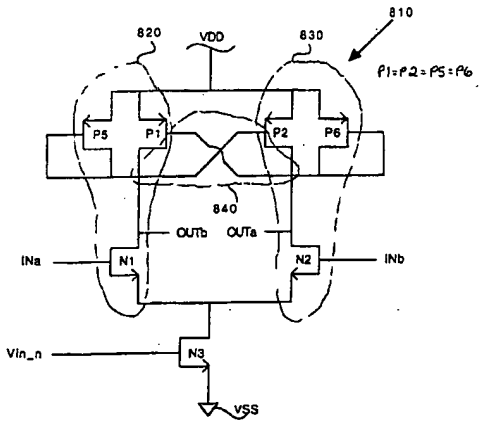

FIG. 8A

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EUROPEAN SEARCH REPORT

Application Number
EP 97 11 1053

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TECHNICAL FIELDS SEARCHED (Int.Cl.6)

H03K
H03L

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	8 June 1999	Segaert, P

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